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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,965	09/26/2003	Takeshi Tajima	088485-0230	1111

23392 7590 06/30/2005

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EXAMINER

HUYNH, CHUCK

ART UNIT PAPER NUMBER

2683

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,965

Applicant(s)

TAJIMA ET AL.

Examiner

Chuck Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1, 2, 6, 8, 9, 13, 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blakeney, II et al. (hereinafter Blakeney) in view of Hjern et al. (hereinafter Hjern).

Regarding claim 1, Blakeney II discloses an electronic apparatus for performing a wireless communication by selectively using one of first wireless communication device for performing wireless communication by first wireless communication system and second wireless communication device communication by a second wireless communication system, the electronic apparatus performing wireless comprising (Abstract; Col 3, lines 58-63):

means for storing (a table) base station information relating to a position of a base station corresponding to the first wireless communication system and a position of a base station corresponding to the second wireless communication system (Col 2, lines 36-48; Col 3, lines 12-15; Col 7, lines 4-7; Col 8, lines 10-12);

a position detector for detecting a current position of the electronic apparatus
(Col 3, lines 10-12).

Blakeney II discloses all the particulars of the claim except fully disclosing
a switching device for switching between the first wireless communication device
and the second wireless communication device based on the current position of the
electronic apparatus detected by the position detector and the base station information.

However, Hjern discloses a switching device for switching between the first
wireless communication device and the second wireless communication device based
on the current position of the electronic apparatus detected by the position detector and
the base station information (Col 6, lines 24-67, 64, 57-58).

It would have been obvious to one ordinarily skilled in the art at the time of
invention to incorporate Hjern's disclosure to perform mode switching, such as
handover based on position of user terminal to provide connectivity.

Regarding claim 2, Blakeney II discloses the electronic apparatus according to
claim 1, wherein the switching device includes:

means for retrieving an ID of a base station having a communication area that
covers the current position of the electronic apparatus detected by the position detector
from the base station information (Col 3, lines 10-12); and

means for selecting one of the first wireless communication device and the
second wireless communication device to be used for communication accordance with

a wireless communication system corresponding to the ID of the base station retrieved by the retrieving means (Col 3, lines 18-15,19-27; Col 7, lines 4-7).

Regarding claim 6, Hjern discloses the electronic apparatus according to claim wherein the switching device includes means establishing a connection with a partner to which one of the first and second wireless communication device is connected, using the other of the first and second wireless communication devices, when the switching device switches from the one of the first and second wireless communication to the other thereof (Col 2, lines 66-67 – Col 3, lines 1-7; Col 6, lines 47-60).

Regarding claim 8, Blakeney discloses a wireless communication control method which controls wireless communication performed by an electronic apparatus capable of selectively using one of a first wireless communication device for performing wireless communication by a first wireless communication system and second wireless communication device for performing wireless communication by a second wireless communication system (Abstract; Col 3, lines 58-63), the method comprising:

detecting a current position of the electronic apparatus (Col 3, lines 10-12); and

Blakeney discloses all the particulars of the claim except switching between the first wireless communication device and the second wireless communication device based on base station information relating to position of a base station corresponding the first wireless communication system and that of a base station corresponding to the

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second wireless communication system and the detected current position the electronic apparatus.

However, Hjern does disclose switching between the first wireless communication device and the second wireless communication device based on base station information relating to position of a base station corresponding the first wireless communication system and that of a base station corresponding to the second wireless communication system and the detected current position the electronic apparatus (Col 6, lines 24-67, 64, 57-58).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Hjern's disclosure to perform mode switching, such as handover based on position of user terminal to provide connectivity.

Regarding claim 9, Blakeney discloses the wireless communication control method according to claim 8, wherein the switching includes:

retrieving a base station ID having a communication area that covers the detected current position of the electronic apparatus from the base station information (Col 3, lines 10-12); and

selecting one of the first wireless communication device and the second wireless communication device in accordance with a wireless communication system corresponding to the retrieved ID of the base station (Col 3, lines 18-15,19-27; Col 7, lines 4-7).

Regarding claim 13, Hjern discloses the wireless communication control method according to claim 8, wherein the switching includes establishing a connection with a partner to which one of the first and second wireless communication devices connected, using the other the first and second wireless communication devices means, switching device switches from the one of the first and second wireless communication to the other thereof (Col 2, lines 66-67 – Col 3, lines 1-7; Col 6, lines 47-60).

Regarding claim 19, Blakeney discloses an electronic apparatus for performing wireless communication by selectively using one of first wireless communication device for performing wireless communication by a first wireless communication system and second wireless communication device for performing wireless communication by a second wireless communication system (Abstract; Col 3, lines 58-63), the electronic apparatus comprising:

means for storing base station information relating to an environment of a base station corresponding to the first wireless communication system and an environment of a base station corresponding the second wireless communication system (Col 2, lines 36-48; Col 3, lines 12-15; Col 7, lines 4-7; Col 8, lines 10-12);

a position detector for detecting a current position of the electronic apparatus (Col 3, lines 10-12).

Blackeney discloses all the particulars of the claim except the switching between the first wireless communication device and the second wireless communication device

based on the current position of the electronic apparatus detected by the position detector and the base station information.

However, Hjern does disclose the switching between the first wireless communication device and the second wireless communication device based on the current position of the electronic apparatus detected by the position detector and the base station information (Col 6, lines 24-67, 64, 57-58).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Hjern's disclosure to perform mode switching, such as handover based on position of user terminal to provide connectivity.

Regarding claim 20, Blackeney discloses a wireless communication control method which a switching device for controls wireless communication performed by an electronic apparatus capable of selectively using one of a first wireless communication device for performing wireless communication by a first wireless communication system and second wireless communication device for performing wireless communication by a second system (Abstract; Col 3, lines 58-63), the method comprising:

detecting a current position of the electronic apparatus (Col 3, lines 10-12).

Blakeney discloses all the particulars of the claim except switching between the first wireless communication device and the second wireless communication device based on base station information relating to an environment of a base station corresponding to the first wireless communication system and that of a base station

corresponding the second wireless communication system and the detected current position of the electronic apparatus.

However Hjern does disclose switching between the first wireless communication device and the second wireless communication device based on base station information relating to an environment of a base station corresponding to the first wireless communication system and that of a base station corresponding the second wireless communication system and the detected current position of the electronic apparatus (Col 6, lines 24-67, 64, 57-58).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Hjern's disclosure to perform mode switching, such as handover based on position of user terminal to provide connectivity.

3. Claim 3, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blakeney in view of Hjern in further view of Williams et al. (hereinafter Williams).

Regarding claim 3, Blakeney in view of Hjern disclose all the particulars of the claim except the electronic apparatus according to claim 1, wherein electronic apparatus is in-vehicle electronic equipment installed in a vehicle, and the position detector includes means for detecting a current position of the vehicle.

However, Williams discloses the electronic apparatus according to claim wherein electronic apparatus is in-vehicle electronic equipment installed in a vehicle, and the

position detector includes means for detecting a current position of the vehicle (Col 1, lines 29-41, 39).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate such an apparatus into a vehicle to provide communication.

Regarding claim 10, Blakeney in view of Hjern disclose all the particulars of the claim except the wireless communication control method according to claim 8, wherein electronic apparatus is in-vehicle electronic equipment installed in a vehicle, and the position detector includes means for detecting a current position of the vehicle.

However, Williams does disclose the wireless communication control method according to claim 8, wherein electronic apparatus is in-vehicle electronic equipment installed in a vehicle, and the position detector includes means for detecting a current position of the vehicle (Col 1, lines 29-41, 39).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate such an apparatus into a vehicle to provide communication.

4. Claim 4, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blakeney in view of Hjern in further view of Bamburak et al. (hereinafter Bamburak).

Regarding claim 4, Blakeney in view of Hjern discloses all the particulars of the claim except the electronic apparatus according claim 2 wherein the first wireless communication system has communication speed that is higher than that of second wireless communication system, and the switching device includes means for selecting

the first wireless communication device as having a higher priority than second wireless communication device when the retrieving means retrieves a base station ID corresponding to the first wireless communication system and also a base station corresponding the second wireless communication system.

However, Bamburak does disclose the electronic apparatus according claim 2 wherein the first wireless communication system has communication speed that is higher than that of second wireless communication system, and the switching device includes means for selecting the first wireless communication device as having a higher priority than second wireless communication device when the retrieving means retrieves a base station ID corresponding to the first wireless communication system and also a base station corresponding the second wireless communication system (Col 6, lines 42-51; Col 5, lines 7-10).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Bamburak's disclosure to establish the strongest connectivity link possible for communication.

Regarding claim 11, Blakeney in view of Hjern discloses all the particulars of the claim except the wireless communication control method according to claim 9, wherein the first wireless communication system has a communication speed that higher than that of the second wireless communication system, and the switching includes selecting the first wireless communication device as having a higher priority than the second communication device when an ID of a base station corresponding to the first wireless

communication system and also an ID of a base station corresponding to the second wireless communication system are retrieved.

However Bamburak does disclose the wireless communication control method according to claim 9, wherein the first wireless communication system has a communication speed that higher than that of the second wireless communication system, and the switching includes selecting the first wireless communication device as having a higher priority than the second communication device when an ID of a base station corresponding to the first wireless communication system and also an ID of a base station corresponding to the second wireless communication system are retrieved (Col 6, lines 42-51; Col 5, lines 7-10).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Bamburak's disclosure to establish the strongest connectivity link possible for communication.

5. Claim 5, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blakeney in view of Hjern in further view of Wickman et al. (hereinafter Wickman).

Regarding claim 5, Hjern discloses the electronic apparatus according to claim 2, wherein the electronic apparatus in-vehicle electronic equipment installed in a vehicle (it is well known that a dual mode phone can be installed in a vehicle), the first and second wireless communication systems differ from each other in a communication area covered (cover different parts)(Col 5, lines 45-54), and

Hjern discloses all the particulars of the claim except the electronic apparatus further comprises speed detecting means for detecting a speed of the vehicle, and the switching device includes means for selecting between the first and second wireless communication devices in accordance with the speed of the vehicle detected by the speed detector when the retrieving means retrieves a base station ID corresponding to the first wireless communication system and also a base station ID corresponding to the second wireless communication system.

However, Wickman does disclose the electronic apparatus according to claim 2, wherein the electronic apparatus further comprises speed detecting means for detecting a speed of the vehicle (Col 1, lines 13-14; Col 4, lines 27-34), and the switching device includes means for selecting between the first and second wireless communication devices in accordance with the speed of the vehicle detected by the speed detector when the retrieving means retrieves a base station ID corresponding to the first wireless communication system and also a base station ID corresponding to the second wireless communication system (Col 4, lines 35-43).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Wickman's disclosure such as a vehicle speed detector to provide vehicle velocity data; it would have also been obvious to one ordinarily skilled in the art at the time of invention to incorporate Wickman's disclosure of granting access to switch to a particular communication system.

Regarding claim 12, Hjern discloses the wireless communication control method according claim 9, wherein the electronic apparatus is in-vehicle electronic equipment installed in a vehicle, the first and second wireless communication systems differ from each other in communication area covered by their respective base stations (cover different parts)(Col 5, lines 45-54).

Hjern discloses all the particulars of the claim except the method further comprises detecting a moving speed of the vehicle, and the switching includes selecting from the first and second wireless communication devices accordance with the detected moving speed of the vehicle when an ID of a base station corresponding to the first wireless communication system and also an ID of base station corresponding to the second wireless communication system are retrieved.

However, Wickman does disclose the method further comprises detecting a moving speed of the vehicle (Col 1, lines 13-14; Col 4, lines 27-34), and the switching includes selecting from the first and second wireless communication devices accordance with the detected moving speed of the vehicle when an ID of a base station corresponding to the first wireless communication system and also an ID of base station corresponding to the second wireless communication system are retrieved (Col 4, lines 35-43).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Wickman's disclosure such as a vehicle speed detector to provide vehicle velocity data; it would have also been obvious to one ordinarily skilled in

the art at the time of invention to incorporate Wickman's disclosure of granting access to switch to a particular communication system.

6. Claim 7, 14, 15, 16, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blakeney in view of Hjern in further view of Wu et al. (hereinafter Wu).

Regarding claim 7, Blakeney in view of Hjern discloses all the particulars of the claim except the electronic apparatus according to claim 1, further comprising:

means for predicting one of base stations corresponding to the wireless communication system of one the first and second wireless communication devices as a base station targeted for roaming, based on the current position of the electronic apparatus detected by the position detector and the base station information; and

means for performing a roaming process for switching the base station from a currently wirelessly connected base station to the predicted base station.

However, Wu does disclose the electronic apparatus according to claim 1, further comprising:

means for predicting one of base stations corresponding to the wireless communication system of one the first and second wireless communication devices as a base station targeted for roaming, based on the current position of the electronic apparatus detected by the position detector and the base station information (Col 9, lines 10-22; Col 10, lines 14-21, 30-32); and

means for performing a roaming process for switching the base station from a currently wirelessly connected base station to the predicted base station (Col 9, lines 10-22; Col 10, lines 14-21, 30-32).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Wu's disclosure on predicting the next access point on route to establish continuous wireless communication.

Regarding claim 14, Blakeney in view of Hjern discloses all the particulars of the claim except the wireless communication control method according to claim 8, further comprising:

predicting one of base stations corresponding the wireless communication system of one of the first and second wireless communication devices as a base station targeted for roaming, based on the detected current position of the electronic apparatus and the base station information; and

performing a roaming process for switching the base station from a currently wirelessly connected base station to the predicted base station.

However, Wu does disclose predicting one of base stations corresponding the wireless communication system of one of the first and second wireless communication devices as a base station targeted for roaming, based on the detected current position of the electronic apparatus and the base station information (Col 9, lines 10-22; Col 10, lines 14-21, 30-32; and

performing a roaming process for switching the base station from a currently wirelessly connected base station to the predicted base station (Col 9, lines 10-22; Col 10, lines 14-21, 30-32).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Wu's disclosure on predicting the next access point (base station) on route to establish continuous wireless communication.

Regarding claim 15, Blakeney in view of Hjern disclose all the particulars of the claim except the electronic apparatus according to claim 1 further including a position direction determining device for determining the current direction of movement of the electronic apparatus and wherein the switching device switches between the first and second wireless communication devices based additionally on the current direction of movement of the electronic apparatus.

However, Wu does disclose the electronic apparatus according to claim 1 further including a position direction determining device for determining the current direction of movement of the electronic apparatus and wherein the switching device switches between the first and second wireless communication devices based additionally on the current direction of movement of the electronic apparatus (Col 9, lines 10-22; Col 10, lines 18-21).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Wu's disclosure on determining directional movement to the

next access point (base station) on route to establish continuous wireless communication.

Regarding claim 16, Wu discloses the electronic apparatus according to claim 7 further including a position direction determining device for determining the current direction of movement the electronic apparatus and wherein the predicting means also additionally utilizes on the current direction of movement the electronic apparatus to determine the base station targeted for roaming (Col 9, lines 10-22).

Regarding claim 17, Blakeney in view of Hjern disclose all the particulars of the claim except the electronic apparatus according to claim 8 further including determining the current direction movement of the electronic apparatus and wherein the switching between the first and second wireless communication devices based additionally on the current direction of movement of the electronic apparatus.

However Wu does disclose the electronic apparatus according to claim 8 further including determining the current direction movement of the electronic apparatus and wherein the switching between the first and second wireless communication devices based additionally on the current direction of movement of the electronic apparatus (Col 9, lines 10-22; Col 10, lines 18-21).

It would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate Wu's disclosure on determining directional movement to the

next access point (base station) on route to establish continuous wireless communication.

Regarding claim 18, Wu discloses the electronic apparatus according to claim 14 further including determining the current direction movement of the electronic apparatus and wherein the predicting also additionally utilizes on the current direction of movement of the electronic apparatus to determine the base station targeted for roaming (Col 9, lines 10-22).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Oda, Toshiaki discloses a radio telephone system within a vehicle with enhanced safety features

Werbus, Volker discloses an arrangement for operating a mobile terminal in a wireless switching system based on different communication standards

Ault, Jan C. discloses a method and apparatus for system determination in a multi-mode subscriber station

Kraft, Christian discloses a Telephone automatic mode selection

Nordlund, Peter discloses a Radio communication system and method for analog and

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digital traffic channel allocation using a second higher threshold when allocating a digital channel

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Huynh whose telephone number is 571-272-7866. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chuck Huynh


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